Contents

Section 4 — Implementing Site Readiness

List of Tables

List of Forms and Tools

4

Implementing Site Readiness

This section addresses actions to be taken by field element readiness teams immediately following an accident. All of these actions occur ***before*** the DOE accident investigation board chairperson arrives on site.

Many immediate post-accident activities are concurrent with emergency actions taken to save lives and limit losses and hazards. Emergency action considerations—particularly lifesaving and life-protecting activities—always take first priority, even if property or evidence is destroyed, distorted, or broken in the process. The adverse effects of tradeoffs that must be made during emergency response can be minimized through advance preparation and planning to ensure proper coordination of emergency actions with initial investigative activities.

It is important, therefore, that the head of the field element ensure that readiness teams and emergency response personnel coordinate their activities for optimal emergency and initial investigative response. Following these initial actions, the field or program office point of contact is responsible for ensuring a smooth transition of initial investigative activities to the accident investigation board chairperson, including transferring evidence and other information relevant to the accident.

4.1 Immediate Post-Accident Actions

Immediately after an accident occurs, the field or program office point of contact is responsible for notifying and providing critical information to the following individuals: the head of the field element; the cognizant secretarial officer or responsible official at the appropriate Headquarters element; the Accident Investigation Program Manager; the board chairperson (after appointment); the emergency operations center; and the emergency response team. The point of contact then:

- Coordinates with the emergency response team to preserve the accident scene
- Begins legal negotiations for temporary control of the area if the accident occurs on public property or on property owned by a private party
- Establishes an accident investigation "command center" (a large, dedicated conference room to be used exclusively by the accident investigation board)
- Initiates collection and control of evidence and documentation of the accident scene and scenario
- Manages identification of witnesses and collection of witness statements

- Determines which contractor and line organizations are affected by the accident
- Provides input into decisions made by line managers regarding mitigation actions and the restoration of operations, as appropriate.

Each site readiness team member has responsibility for supporting some portion of these activities, particularly those described in the sections that follow.

4.2 Preserving and Documenting the Accident Scene

The effectiveness of an accident investigation depends on immediate preservation of the accident scene and the physical, human, and documentary evidence related to the accident. Because the accident investigation board may not arrive until two or three days after the accident, the site readiness team preserves and documents the condition and status of the accident scene. This encompasses assessing the medical condition and fitness-for-duty status of the injured or others involved in the accident (including requesting an autopsy, as appropriate), and preserving and recording the accident scene by means of written documentation, sketches, video, and photographs (including the location of equipment, parts, materials, debris, spills and stains, injured parties and witnesses, and other pertinent items). Procedures to be used by the site readiness team in preserving, collecting, and documenting evidence for the board are discussed below.

4.2.1 Securing and Preserving the Scene

The accident scene should be secured immediately following an accident. This can be achieved in several ways, including:

- Removing and excluding all persons from the accident scene except essential emergency responders
- Cordoning the area with rope, tape, or barricades
- Locking doors and gates
- Posting warning signs
- Posting security personnel to control access
- Taking photographs and narrated videotape recordings of the accident scene, especially of any evidence that easily can be destroyed (e.g., tire tracks, fluids on the ground).

TIP

Securing a frequently used or public area may require additional efforts. Security personnel can be posted around the area to help secure the accident scene long enough for the site readiness team to complete a thorough walkthrough and document the scene, if long-term access controls are not feasible.

To effectively preserve the accident scene, the first member of the site readiness team to arrive is responsible for performing a walk-through to:

- Characterize the accident scene
- Identify key human, physical, and documentary evidence
- Identify changes made to the scene because of accident mitigation activities
- Define the physical characteristics of the accident scene (e.g., "injured person is four feet from equipment, lying face down").

This initial information should be documented through notes or diagrams labeled as "initial walkthrough."

TIP

If the accident occurs in an area that makes securing the accident scene difficult, the walkthrough may be the sole opportunity to collect and preserve important evidence.

4.2.2 Documenting the Scene

Designated site readiness team members are responsible for recording the accident scene as it exists after the accident. Effective documentation methods include:

- Photographs
- Videotapes
- Initial position maps
- Sketches.

Because a professional photographer or videographer may not be available, it is important that designated site readiness team members be familiar with these techniques so that they can capture the initial state of the accident scene. Site readiness team members need to be aware of what documentary evidence is needed for successful accident investigations. A sufficient number of qualified readiness team members should be available on site to perform these functions at all times. If necessary, initial photographs and videotapes can be supplemented later with professional photographs and videotapes.

Sketches and position maps can be used to note items removed from the scene prior to photographing and videotaping. These sketches and maps should include measured distances and directions from reference objects that will remain at the scene. The original location of evidence should be marked at the accident scene (using paint, tape, chalk, or other appropriate media) before evidence is removed.

Details on documenting the accident scene using photographs, videotapes, position maps, and sketches are provided in Section 6 of this workbook.

4.3 Collecting, Preserving, and Controlling Evidence

There are three types of evidence: physical, human (given through witness statements or interviews), and documentary (including photographic media). Physical evidence at an accident scene may include solids, liquids, and gases. Documentary evidence includes all the documentation developed by the site readiness team, as well as accident-related paper and electronic information, such as logbooks, instrument charts, as-built drawings, engineering analyses, vendor information, correspondence, and computer software.

Most physical evidence can safely be left intact at a protected accident scene to await examination by the investigation board. However, some evidence may be too perishable to remain safely at the scene, and some may have been removed during emergency response or casualty evacuation. Perishable evidence includes artifacts that may provide information about the accident and are located at the scene, but that may be corrupted, moved, or lost if left at the scene. For example, fluids emanating from equipment or vehicles involved in an accident may quickly evaporate or be absorbed by surrounding materials. Therefore, fluid samples should be taken quickly.

Before any evidence is removed from the accident scene, site readiness team members should preserve its integrity by:

- Recording the exact location and orientation of evidence at the scene, using measurements, logs, sketches, photography, and video
- Establishing secure storage locations for evidence
- Establishing and maintaining a strict chain of custody (documentation showing physical custody) for each item of evidence
- Ensuring that access to evidence is limited only to those who are investigating the accident until transfer of the evidence to the accident investigation board.

Tools to use in collecting, preserving, and controlling evidence are discussed in Section 6 of this workbook.

TIP

Be conservative in determining whether items are evidence. It is easy to discard items that are not needed later on, but it may be difficult or impossible to recover discarded items intact.

4.4 Obtaining Initial Witness Statements

Human evidence (evidence given through witness statements or interviews) also must be immediately preserved by identifying and isolating witnesses. A witness is anyone who either directly observed or was affected by the accident, or who was directly or indirectly involved in the process, equipment, or system affected. Statements from witnesses must be taken as soon as possible, preferably before they leave the accident scene, to ensure that initial observations and impressions are not lost or altered.

TIP

Quickly identify witnesses and take their statements (e.g., from injured parties, eyewitnesses, and other participants) because witnesses' initial statements are more accurate and have greater credibility than those made later.

Other persons, such as emergency response personnel, persons who arrive at the scene shortly after the accident, and anyone else who might be expected to provide material information about the accident, should be identified, located, and asked to provide statements. Early statements form the basis for documenting the accident sequence and identifying potential interviewees for the more extensive and formal interviews to be conducted later by the accident investigation board. Guidance on gathering witness statements is provided below.

If accident circumstances prevent the site readiness team from taking witness statements at the scene, names and contact information for all witnesses should be recorded. The *Accident Investigation Preliminary Interview List* (see end of this section) can be used to record this information. To preserve initial observations, witnesses to the accident should be: (1) informed not to talk about the accident except to accident response and investigative personnel, and (2) isolated to the extent possible before and while giving their initial statements. Usually, witnesses can be categorized as shown in Table 4-1, with initial statements taken in the order in which the categories are listed.

Table 4-1. Several types of witnesses should provide preliminary statements.

Type of Witness	Relationship to the Accident
Principal Witnesses	■ Those directly involved in or who sustained injury from the accident
Eyewitnesses	■ Participants ■ Observers of the accident or events immediately preceding, during, or following the accident
Emergency Response Personnel and Site Readiness Team Members	■ Those arriving at the scene shortly after the accident
Other Potential Witnesses	■ Those in the vicinity of the accident ■ Those with knowledge of preceding events or conditions, such as shift workers on duty prior to the shift during which the accident occurred; the shift change-over team leader; or security personnel who may have conducted a recent walkthrough ■ Persons with work tasks related to the process, equipment, or facility involved ■ Equipment and facility designers, operators, procurement specialists, and safety and quality personnel

Some witnesses may leave the accident scene before they are identified. To ensure that all witnesses are identified:

- Ask witnesses to list or recall others at the scene
- Make a public request for information via local media and site notification and communication systems.

A standardized witness statement form, such as the *Accident Investigation Witness Statement Form* (provided at the end of this section), may be used for gathering initial witness statements. Using a standard form helps ensure consistency in the type of information obtained from each witness and helps investigators obtain the information in a structured manner. The questions on this form are open-ended to ensure that witnesses are not constrained from conveying their observations and impressions.

Asking witnesses to sketch or diagram the accident setting also may help capture some of this information. The site readiness team should encourage witnesses to revisit the accident scene to help clarify or recall information.

Finally, any behavioral observations that may impact the witness's statement should be noted.

4.5 Transferring Information to the Board

The field or program office point of contact ensures the orderly transfer of information by:

- Identifying and reporting the accident to the Program Manager
- Briefing the board chairperson and continuing to transfer important information to the chairperson prior to his/her arrival on site
- Continuing communication with the Program Manager
- Providing a detailed, well-structured briefing to the chairperson upon his/her arrival on site and to the entire board when they are assembled on site
- Transferring documentary evidence, along with the secured accident scene and other evidence, to the accident investigation board.

Information should be summarized and organized in a structured manner to provide a clear description of the accident scene and scenario. The point of contact also conducts verbal briefings and faxes accident documentation materials to both the Program Manager and the chairperson. Early access to information allows these persons to start:

- Identifying information about similar types of accidents
- Identifying and contacting appropriate board members
- Identifying and contacting consultants and advisors
- Scoping and planning the accident investigation before the board arrives on site.

KEY POINTS TO REMEMBER

- The site readiness team is responsible for a number of initial investigative activities immediately following an accident, including preserving evidence and documenting the accident scene.
- To facilitate optimal accident response, the site readiness team should maintain close coordination or integration with emergency response personnel and the emergency operations center.
- Emergency response actions take precedence over initial investigative actions. To minimize the loss of evidence, advance planning and coordination with emergency response personnel is necessary.
- The site readiness team should collect, document, and control perishable evidence that cannot remain at the accident scene.
- Initial witness statements should be taken as soon as possible after the accident to ensure maximum accuracy and credibility.
- Procedures should be in place for transferring information collected by the site readiness team to the board chairperson.

This page intentionally left blank.

Accident Investigation Preliminary Interview List

Interviewee/Title	Reason for Interview	Phone	Location/Shift/Company Affiliation	Notes

Accident Investigation Witness Statement Form

Name:	**Job Title:**
Telephone No.	**Supervisor:**
Work Location:	
Location of Accident:	
Accident Time and Date:	
Please fully describe the accident sequence from start to finish (use additional paper as needed):	
Please fully describe the work and conditions in progress leading up to the accident (use additional paper as needed):	
Note anything unusual you observed before or during the accident (sights, sounds, odors, etc.):	
What was your role in the accident sequence?	

Accident Investigation Witness Statement Form

What conditions influenced the accident (weather, time of day, equipment malfunctions, etc.)?
What do you think caused the accident?
How could the accident have been prevented?
Please list other possible witnesses:
Additional comments/observations:

Signature:	Date/Time: